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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,604	07/15/2003	Gordon Bruce Scarth	TR-174-US	5350
29382	7590	09/14/2005	EXAMINER	
TROPIC NETWORKS INC. DR. VICTORIA DONNELLY 135 MICHAEL COWPLAND DRIVE KANATA, ON K2M 2E9 CANADA			PAK, SUNG H	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 09/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No. 10/618,604	Applicant(s) SCARTH ET AL.	
	Examiner Sung H. Pak	Art Unit 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-5, 8-10, 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Ko et al (US 6,600,594 B1).

Ko discloses an optical device with all the limitations set forth in the claims, including: a system and method for operating plurality of electronic variable optical attenuators controlled by a microcontroller, comprising means for selecting one eVOA from the plurality of the eVOAs at a time (Fig. 7; column 6 lines 12-14); means for operating the selected eVOA according to a predetermined method of controlling the selected eVOA within a time slice allocated for the selected eVOA (column 7 lines 6-11); means for repeating the steps until all variable optical attenuators from the plurality of the eVOAs have been selected (Fig. 7);

wherein the means for selecting and operating further comprises a processor for calculating the attenuation of the selected eVOA according to the predetermined method of controlling the selected eVOA during the allocated time (column 6 lines 14-19); a monitor signal processing controller for measuring power of an optical signal at the selected eVOA (column 6 lines 34-41); a microprocessing controller for changing an operating attenuation of the

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selected eVOA in response to a signal received from the processor (column 6 lines 20-25); a means for providing communications between the processor, the monitor signal processing controller, and the microprocessing controller (Fig. 4-5; column 6 lines 7-11);

wherein monitor signal processing controller for measuring power of an optical signal at the selected eVOA comprises a means for measuring the optical signal power at the output of an eVOA (Fig. 4);

wherein the step of operating the selected eVOA comprises setting said eVOA attenuation to a predetermined fixed value, which would be less than minimum attenuation value if the measured power is greater than the target power for the selected eVOA (column 6 lines 29-46);

wherein the microprocessing controller comprises a means for determining a required attenuation level and a means for setting the eVOA at said attenuation level (column 6 lines 14-19); wherein the microprocessing controller further comprises means for adjusting and updating attenuation of the selected eVOA (column 6 lines 20-25);

wherein the device is operated within an optical network system (column 2 lines 32-37).

Further, Ko discloses a method of operating the plurality of eVOA comprising the steps of operating the means as discussed above;

wherein the steps of selecting the eVOA from the plurality of eVOAs comprises continuously cycling through the eVOAs (Fig. 7);

wherein the step of cycling comprises cycling through the eVOA in a prescribed order (Fig. 7);

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wherein the step of operating the selected eVOA comprises measuring an optical signal power of the optical signal at the selected eVOA (Figs. 4, 7);

wherein the step of measuring the optical signal power comprises measuring the optical power at the output of the selected eVOA (Fig. 4);

wherein the step of operating the selected eVOA comprises changing the attenuation of said eVOA in one or more variable size intervals so that the power of the optical signal substantially equals to the target power, the size of the interval being a function of the measured power and the target power (column 9 lines 9-42: attenuation is changed at discrete level via calculated steps/ number of pulses);

wherein the step of operating the selected eVOA comprises measuring the optical signal power at the output of the selected eVOA and if the optical signal power is below a predetermined level, setting the attenuation of the selected eVOA to above the predetermined level and modulating the attenuation by decreasing and increasing the eVOA attenuation in finite steps (column 9 lines 9-42).

Claims 1-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Scarth et al (US 2004/0109662 A1)

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the

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inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Scarth discloses: a method of operating an eVOA comprising: steps of monitoring an optical signal power at an output of the eVOA if the optical signal power is below a loss of signal power threshold, modulating the attenuation of the eVOA, the modulating comprising decreasing and increasing the eVOA attenuation in steps until the optical signal power is detected above the LOS power threshold or a maximum eVOA attenuation is reached (claim 18 of Scarth); decreasing the attenuation in steps, which size is A_s wherein $\{\text{MaxAtt-Ppa}\} \leq S_1 \cdot A_s$ (claim 21); increasing the attenuation in steps, which size is A_s , wherein $\{S_2 \cdot A_s + \text{PPA}\} \leq \text{MaxAtt}$ (claim 21); a microcontroller for monitoring an optical signal power at an output of the eVOA and modulating the attenuation of the eVOA if the optical signal power is below a loss of signal power threshold, the modulating being performed as decreasing and increasing of the eVOA attenuation in steps until the optical power signal is detected above the LOS threshold (claims 1, 18); selecting an eVOA from the plurality of eVOAs, operating the selected eVOA within a time period allocated for the selected eVOA, repeating the steps until all eVOAs from the plurality of eVOAs have been selected and repeating the steps as required (column 8); wherein the step of selecting the eVOA comprises a step of continuously cycling the eVOAs in a specified time period “T” wherein “T” is sum of all time periods $\{t_i$ and $I=1, \dots, n\}$, “n” is the number of eVOAs and t_i is the time for actively controlling each eVOA and choosing $\tau = T/n$ where τ is the time for actively controlling each eVOA (claims 14, 19); wherein the cycling through the plurality of eVOAs comprises taking a finite time “ T_s ” for each attenuation step, and

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$\tau = S \cdot T_s < T/n$, wherein S is the maximum number of steps for increasing and decreasing the eVOA attenuation (claim 19).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ko et al (US 6,600,594 B1) in view of Beine et al (US 6,304,347).

Ko discloses an optical device with claimed limitations as discussed above, except it does not explicitly teach the use of a time for generating an allocated time slice for monitoring and controlling the selected eVOA.

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On the other hand, Beine discloses the use of a timer for generating allocated time slice for monitoring and controlling VOAs (column 38 lines 28-30). The use of a timer is considered advantageous and desirable because it allows for precise and more efficient VOA control algorithm, which increases the over efficiency of the optical communications system.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the Ko device to have a timer for generating allocated time slice for VOA monitoring and control.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-15 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of copending Application No. 10/618,582. Although the conflicting claims are not identical, they are not patentably distinct from each other because all the claimed limitations of the present application is disclosed and anticipated by the claims of the '582 application.

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This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 20040165857, US 20040197105, US 20050025409 disclose variable optical attenuators and methods of operating such.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sung H. Pak whose telephone number is (571) 272-2353. The examiner can normally be reached on Monday- Friday, 9AM-5PM.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sung H. Pak
Patent Examiner
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